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the insect may gain by the stimulation of the males, the flower playing the part which in so many species is played by female coquetry.

LORD ROTHSCCHILD has pointed out (*The Orchid Review*, vol. xxxiii, No. 382, Apr. 1925, p. 99) that there were numerous hybrids between *Ophrys lutea*, *fusca* and *speculum*, implying the existence of insects fertilizers which were common to two or more of these species. Col. Godfery has already shown that *Andrena trimmerana* visits *Ophrys fusca*, carrying off the pollinia on its tail, and also seeks *O. arachniformis*, carrying them on its head, these differences of position being correlated with the different orientation of the bee. Nevertheless the long-continued observations of Pouyanne point to the conclusion that he has discovered the normal process and that any other must be comparatively rare.*

Referring to the Algerian observations on *O. speculum*, Col. Godfery writes—"Such is the evidence of M. Pouyanne, whose refusal to admit the conclusiveness of his observations till confirmed by repeated experiments in successive years is beyond all praise" (*ibid.*, p. 36). Furthermore, while fully admitting the imperfection of the resemblance to an insect in the markings of *O. lutea* and *O. fusca*, Col. Godfery continues—"Nevertheless, it is undeniable that only males visit the flowers, that they seek neither nectar nor edible tissue, and that they act in exactly the same manner as if the markings on the lip were really a female of their own species. Nothing short of seeing this with my own eyes was sufficient to dismiss all doubts from my rather incredulous mind" (p. 40).

Wednesday, June 1st, 1927.

Mr. J. E. COLLIN, President, in the Chair.

Election of Fellows.

The following were elected Fellows of the Society:—R. L. COE, St. Andrew's Street, Mildenhall, Suffolk; E. EARLE, 137, Westbourne Terrace, W.2; T. H. EDMONDS, Strathmore, Totnes, Devon; Dr. G. GRANDI, R. Instituto Superiore Agrario, via Zamboni, 33, Bologna, Italy.

Exhibits.

MELANIC LEPIDOPTERA.—Capt. H. C. PHILLIPS exhibited and made remarks on two examples of melanism in Lepidoptera.

A BRITISH EXAMPLE OF *CRYPTOCEPHALUS PRIMARIUS*.—Commander J. J. WALKER exhibited a ♂ specimen of *Cryptocephalus primarius*, Harold (*imperialis*, F.), taken on the chalk downs near Cholsey, Berks, on May 26th in a flower of *Helianthemum chamaecystus*, by Mr. O. W. Richards, B.A., F.E.S.

The only known British example of this beetle, previous to the present capture, was taken by the late Dr. J. A. Power on the Gogmagog Hills, Cambridgeshire,

* Col. Godfery informs me that hybrids between *O. fusca* and *lutea*, although known, are extremely rare, but that it is very doubtful whether any hybrid between either of these and *O. speculum* exists.

some time previous to 1859, and is now in the collection of British Coleoptera in the Natural History Museum.

THE CLEARING UP OF AN UNCERTAINTY CONCERNING ONE OF THE GYNANDROMORPH *PAPILIO DARDANUS*, BROWN, EXPERIMENTALLY PRODUCED BY DR. V. G. L. VAN SOMEREN.—Prof. POULTON said that he was now fortunately able to remove every trace of doubt concerning gynandromorph F described on pp. 88, 89 and represented on pl. II, fig. 5, of the Address on 19 January, 1927 (*Proc. Ent. Soc. Lond.*, vol. i, pt. iii, 1927). The uncertainty arose from the necessary delay which attends correspondence with a distant friend. The shock experiments were suggested (*ibid.*, p. 81) by the results obtained by W. A. Lamborn and C. F. M. Swynnerton, who had produced, by artificial conditions, slight traces of "tails" on the hindwings of the normally tailless mimetic females of *dardanus*. When these and other male-like features appeared, combined with those of the female, on Dr. van Someren's specimens they were at first interpreted, not as gynandromorphs, but as the reversion of the female to an ancestral male-like form (as in Madagascar, etc.), only differing from the Lamborn-Swynnerton results in being carried much farther. Hence all the examples figured on pl. II were at first thought to be females which had reverted more or less completely to a male-like pattern. This was the conclusion set forth in Dr. van Someren's note published in 1924 and quoted on p. 82 of the Address. Thus the "complete male coloration" referred to as present in one wing, was exhibited by the L.H.W. of fig. 7, in two wings by the R. wings of fig. 8, in three by all wings except the R.H. of fig. 5, in all four by fig. 4, which, however, bears a trace of the female pattern in the R.F.W. Gynandromorph F with three wings entirely male was first entered in the table as a male but afterwards interpreted as a *mixtus* form of the female (this form being suggested by the orange-brown streaks and the marginal pattern of the R.H.W.) of which three wings had reverted completely and the fourth incompletely to a male-like pattern. That this interpretation was incorrect is proved by the male armature of the specimens represented in figs. 4-8, and the fact that the F.W. in male-like females of *dardanus* always exhibits a conspicuous black costal mark entering the cell—a mark wanting from the F.W.s represented in these figures.

Thus all doubt is at an end and male F, with female admixture, is certainly the specimen marked K in the register of Family 46 bred from known parents by Dr. V. van Someren in 1923. Including K, this family contained 123 offspring, of which 122 were normal, while K, alone subjected to shock in the pupal state, alone gave rise to a gynandromorph. The suggestion of mere coincidence which my friend Prof. T. H. Morgan of New York was inclined to adopt does not offer a probable explanation of these facts which are further confirmed by the other results obtained by Dr. van Someren. All the gynandromorphs represented on pl. II of the Address emerged from pupae subjected to shock and all were members of families—figs. 1-3 in one family, each of the remaining five in a separate family—of which the other members, not so treated, were normal.

Dr. van Someren's experiments, thus conducted on the members of known families, yielded evidence that the mixture of male and female characters was not due to reversion, but to a revelation of the latent characters of the opposite sex. The families including the males represented in figs. 4, 5, 7, and 8, contained normal

female forms similar to those exhibited by these males. In other words, the female form latent in the male had been revealed by the shock and was seen to represent one of the normal female forms in the same family. Moreover, omitting the male shown in fig. 6 and belonging to a family of unknown constitution, the female form represented on the R.H.W. of fig. 5 was not present in any other family containing males with female admixture, while the female form represented by the L.F.W. of fig. 8 was only present in one other family, viz. that containing the male shown in fig. 7. Furthermore, the fact that the male produced female characters just as readily as the female produced male characters also proved that these results had nothing to do with reversion to an older condition. Hence a statement made, in an otherwise excellent account of Dr. van Someren's experiments, in the *Morning Post* of 13 April, 1927, is not strictly correct. The writer there states that "it still remains an open question whether the results obtained by shock are due to reversion towards an ancestral condition, not necessarily remote, rather than to the production of gynandromorphism." In this statement, mainly quoted from the Address (p. 83), the words "the results" have been unfortunately substituted for "certain results." These latter are explained in the Address (*l.c.*), and clearly shown to be different from the admixture of male and female characters, which form its main subject. The appearance in question was the existence of a far more developed black band on the hind-wings of male F (fig. 5), than in any of the other 57 males in the same family. Now that all doubt about the family to which F belonged has been removed it is convenient to write a few more words on the subject. At Nairobi, where the parent of F was taken, there is every transition between the heavily marked hind-wing in males of the race *P. dardanus tibullus*, Kirb., from E. Kenya Colony, and the lightly marked wing in males of the race *P. d. dardanus* of Uganda and *P. d. polytrophus*, Jord., of the Kikuyu Escarpment. While the 57 males produced from normal pupae exhibited rather lightly marked hind-wings, those of male F were as heavily marked as in the race *tibullus*, from the E. coast. It is difficult to resist the conclusion that the shock had here produced reversion to some earlier strain, which, in view of the varieties of male which exist intermixed at Nairobi, may probably have been but a little way back in the ancestry. The reappearance of such a character as a result of shock, if confirmed, would be of the highest interest.

SOME PAPILIOS TAKEN AT DJEM-DJEM IN CENTRAL ABYSSINIA BY DR. HUGH SCOTT.—Prof. POULTON exhibited on behalf of the British Museum (Nat. Hist.) the following Papilios which he had compared with the specimens collected in S.W. Abyssinia by Mr. Arnold Hodson, C.M.G. (*Proc. Ent. Soc. Lond.*, 1925, pp. xlii–lii).

Papilio rex abyssinicus, Poulton, ♂.—This, the second example to be captured, was smaller than the ♂ type, the F.W., from base to apex, measuring 63.0 mm. as compared with 67.0 mm. In pattern it closely resembled the type on both upper and under surfaces, but the outer margin of F.W. was more deeply bayed. In other respects the shape was that of the type rather than that of the more southern and western races of *rex*, in which the apical part of the male F.W. is more prolonged and narrowed, giving to it a somewhat hook-like appearance. The specimen was captured in Djem-Djem Forest, on 29 September, 1926, and is accompanied by the note "flying in same place with two others." It was possible that these

last were examples of the model, *Danaida formosa neumanni*, Rothsch., of which four were taken by Mr. Hodson at the same time and place as its *Papilio mimic* (*ibid.*, p. xlv).

Papilio dardanus, Brown.—Fourteen males, one male-like female and two *niavoides*, Kheil, females, of Abyssinian forms of *dardanus*, were captured between 21 September and 8 October, 1926, at Djem-Djem (about 8000 ft.) or in the Djem-Djem Forest (8000–9000 ft.). The females and representative males were exhibited to the meeting. One *niavoides* female had short tails to the hind-wing, the other long tails. Both differed from the *niavoides* females described in *Proc. Ent. Soc. Lond.*, vol. i, 1926, pp. 6, 7, in that the broad dark border of the H.W. upper surface was a nearly uniform black instead of exhibiting black markings in a fuscous ground. Dr. Hugh Scott's examples had therefore evolved a stage further in the mimetic resemblance to *Amauris niavius aethiops*, Rothsch.—a development unseen in a recently received *niavoides* female taken by Mr. Arnold Hodson in S.W. Abyssinia, at the Haeto River, Nado's Province (6900 ft.), on 23 January, 1927. This last female was in another respect remarkably primitive, having exceptionally long tails to the hind-wing. Judging from the black pigment on the tails of Dr. Hugh Scott's males, it appeared that the majority were of the race *hodsoni*, Poulton, although some were *antinorii*, Oberth., and others intermediate. Further comment upon them was deferred until they have been compared with a fine series from W. and S.W. Abyssinia, recently received from Mr. Hodson.

Papilio echerioides oscar, Rothsch.—A male and female of this species, captured in the Djem-Djem Forest on 10 October and 29 September, respectively, were exhibited. The label of the male bore the additional words "deep, shady forest." The specimens resembled those taken by Mr. Hodson in S.W. Abyssinia (*ibid.*, 1925, p. lii).

A NEW *PLANEMA* (ACRAEINAE) ENTERING THE UGANDA ASSOCIATION WITH *PL. MACARISTA*, E.M.SH., AS ITS CENTRAL MODEL.—Prof. POULTON exhibited the male and female of a new species of *Planema* closely allied to *poggei*, Dew., and *adrasta*, Weym., but in both sexes bearing a strong resemblance to *macarista*, E.M.Sh., *macaria hemileuca*, Jord., also, in the female, to the female of *alcinoe camerunica*, Auriv., in the male to the *aurivillii*, Staud., female of *Acraea alciope*, Hew. The specimens, which were collected, the male in January, 1922, and the female in November, 1921, in the W. Elgon district of Uganda, had been kindly sent to him by Dr. V. G. L. van Someren. In size this new form was a rather small member of this *Planema* association, as was shown by the following measurements of F.W. from base to apex in representative specimens :—

	♂	♀	
W. Elgon <i>Planema</i>	38 mm.	37 mm.	♀ wing much broader than ♂.
<i>poggei nelsoni</i>	37 mm.	45 mm.	♂ wing much broader than ♂ of above form.
<i>macarista</i>	40 mm.	40 to 45 mm.	♀ very variable in size.
<i>macaria hemileuca</i>	43 mm.	49 mm.	
<i>alcinoe camerunica</i>	39 mm.	45 mm.	

The F.W. of *Planema adrasta*, in the N.E. of Tanganyika Territory and therefore far outside the association, measures 34 mm. in a representative male, 39 in a female, the greater length of the male F.W. from W. Elgon being due to an extension

of the apical region, producing a close superficial likeness to the males of *macarista*, *hemileuca* and *camerunica*, and to the *aurivillii* female of *A. alciope*.

The true relationship of this new species was kindly determined by Dr. Eltringham, who examined the ♂ armature and found that it closely resembled that of *poggei poggei*, *p. nelsoni*, Gr.-Sm., and *adrasta*, being of a smaller and much simpler type than in *macarista* and its two associates, which differed markedly from each other as well as from the species described below, and other members of the *poggei* group.

***Planema elgonense*, n. sp.**

Male fore-wing upper surface.—Resembles in form (especially in the deeply bayed outer margin), and in the deep tint of the tawny band, that of the ♂ *macarista*. The outer border of the band is more strongly serrated in areas 1b, 2, and 3 and this part of the band is much narrower than in ♂ *macarista*, although, in the areas above these, it is of about the same width. Throughout, the band is much narrower than in the males of *poggei* and *adrasta*. Although the details are different, this marking would, during flight, most closely resemble that of *macaria hemileuca* and the ♀ *A. alciope*. A very distinct feature of both ♂ and ♀ F.W. is due to the two parallel dark intervenular lines, one on each side of the centre of area 1b, and prolonged from the wing-margin well into the band, thus giving a double apex to the invading V between the serrations with their points at vein 1 and vein 2, respectively. These double lines are present in all the other *Planemas* mentioned above, but in none do they form a prominent feature.

Female fore-wing upper surface.—Much broader than in the ♂ and the outer margin barely excavated. The white band is very similar to that of the male, but rather broader throughout, owing to a slight distal widening, the position of the inner border corresponding to that of the ♂. The band is very wide at the inner margin, extending $\frac{2}{3}$ of the distance from the anal angle to the base, that of the ♂ not quite so far.

Hind-wing.—In ♂ and ♀ the white band resembles that of *poggei* more closely than that of *macarista* and its two associates, and the black spots on the basal triangle of the under surface are less distinct above than in these species. The triangle itself is a darker shade of brown, especially in the ♂, than in *macarista*, etc., resembling *poggei* in this respect. Its distal extension is much greater than in *adrasta*, but rather less than in the ♂ *poggei*, about equal to the ♀.

TYPE ♂, paratype ♀, in Hope Collection, Oxford Univ. Museum. Collected by Dr. V. G. L. van Someren in W. Elgon District, N.E. Uganda.

SINGLE EXAMPLES OF THE SOUTHERN GEOGRAPHICAL RACE OF THE ACRAEINE BUTTERFLY *PLANEMA POGGEI POGGEI*, DEW., TAKEN INTERMIXED WITH THE NORTHERN RACE, *P. P. NELSONI*, GR.-SM., IN UGANDA AND W. KENYA.—Prof. POULTON said his friend Dr. V. G. L. van Someren had also sent an interesting male of *Planema poggei*, Dew., taken in April, 1922, at Kaimosi (abt. 5000 ft.), about 20 miles N.E. of Kisumu, and close to the Nandi country. The pattern was that of *poggei poggei*, from which the more northern form *p. nelsoni*, Gr.-Sm., in Uganda and Kenya, "only differs in having the transverse band of the fore-wing posteriorly (in cellules 1a and 1b) narrowed and irregularly incised" (Aurivillius, in Seitz, vol. 13, Engl. transl., p. 243). The specimen is also remarkable in the comparatively narrow H.W. band (6.0 mm. in width at its centre) and its faint ochreous tinge, deepening anteriorly. Dr. Jordan, to whom the specimen had been submitted, suggested that the armature should be studied. Dr. Eltringham had kindly examined it, but found no significant difference between it and *p. poggei* or *p. nelsoni*. Looking

through a part of the series of *poggei* from Uganda presented to the Hope Department by Major C. A. Wiggins, C.M.G., and Dr. G. D. H. Carpenter, D.M., M.B.E., two males with the F.W. pattern of *p. poggei* and a white H.W. band like it and *p. nelsoni*, were soon recognised—one from Busabi, about twenty miles N. of Chawo, between Elgon and the Lake (G.D.H.C.), the other from forest by the Lake shore, at Sebogwawo's, about three miles N.E. of Entebbe (C.A.W.). It was suggested that in the former locality this F.W. pattern, might be advantageous because of its reciprocal resemblance to that of the male of *Pseudacraea eurytus hobleiyi*, Neave, and its female form *poggeoides*, Poulton,—a subspecies and form which appeared to be unusually abundant in that area. It would be interesting to study a long series of *poggei* from this locality. The ochreous tinge of the H.W. band in the Kaimosi male might similarly be due to the presence of *Planema quadricolor latifasciata*, E. M. Sharpe, which occurs in the same and neighbouring localities. Here, too, additional specimens of *poggei* would be very welcome; but, whatever be the interpretation, the appearance of isolated specimens of the southern race intermixed with those of the northern was of great interest.

OBSERVATIONS BY A. H. HAMM, A.L.S., ON THE SELECTION OF A RESTING-SITE BY *VANESSA IO*, L.—Prof. POULTON, in communicating the following note by Mr. Hamm, said that it was deeply interesting to observe the co-operation of instinct with the form or appearance of an animal. In the example here recorded, as in so many others, it was clear that instinct played an even greater part in the survival of the species than that played by the procryptic under surface. The proximity of two insects in one resting-place, commonly observed in hibernation, might be of advantage in affording the opportunity for pairing, and it would be of interest to record the sexes in such little groups of two or more resting together.

"Whilst walking in Bagley Wood, near Oxford, between 3 and 4 p.m., on 23rd April, 1927, my attention was drawn to a moving object in a hole scratched by a rabbit in a low bank by the side of the path. Stooping down I saw to my surprise that it was a specimen of *Vanessa io*, and looking more closely I was still further surprised to find that it was creeping over another *io* that was hanging motionless from the roof, in the deeper shadow. I watched them for a short time until the first-mentioned *io* became still, and had settled down beside the other. A little further on by the margin of a small stream I saw another *V. io* flying slowly and examining various holes in the bank. I watched it for several minutes, and it finally disappeared under the overhanging roots of a large Poplar tree by the stream. As it failed to reappear after the lapse of some minutes I concluded it also had gone to rest for the night, but this could only have been confirmed by wading into the stream. Coming back later on to the hole in the bank, I could not see the butterflies, but when I felt with my hand in the deepest part of the recess, they both dropped down among a few dead leaves and remained perfectly still, feigning death. After a short time, however, they both crept slowly up into the shadow of the roof, where their dark undersides rendered them quite invisible.—A.H.H."

Dr. H. SCOTT gave an account, illustrated with lantern slides, of his recent expedition to Abyssinia.

Wednesday, October 5th, 1927.

Mr. J. E. COLLIN, President, in the Chair.

Obituary.

The PRESIDENT announced the death of Mr. G. C. CHAMPION and referred to his long and distinguished service to the Society as Honorary Librarian. A unanimous vote of condolence to his family was passed.

The deaths of Sir JOHN T. D. LLEWELLYN, Bart., and of Mr. T. F. P. HOAR were also announced.

Election of Fellows.

The following were elected Fellows of the Society :—NORMAN CUNLIFFE, The School of Rural Economy, University of Oxford; A. DE B. GOODMAN, Hatchgate, Massetts Road, Horley, Surrey; and Professor EMBRIK STRAND, The University, Riga, Latvia.

The International Congress of Entomology.

Dr. KARL JORDAN, referring to the next International Congress of Entomology to be held at Ithaca, New York, in August 1928, with Dr. L. O. Howard as President, said that at a meeting of the Organisation Committee at Ithaca early in June this year, at which Dr. Howard and himself were present, means and measures were discussed how to make the Congress a success as an *International* gathering of Entomologists. It was pointed out at that meeting that under the economic conditions prevailing in Europe few European Entomologists would be able to pay the expenses of a visit to the United States, and that Governments and Institutes were very unwilling to give grants to the delegates they might appoint. The Committee therefore resolved that funds be collected in the States for the support of a selected number of European Entomologists who wished to take part in the Congress. Cornell being the *alma mater* of the majority of American Entomologists the gathering will be a very large one and will prove to be most interesting and instructive for Europeans. Entomologists who would like to avail themselves of this opportunity to visit the U.S.A. are asked to communicate with Dr. K. Jordan, Zoological Museum, Tring, Herts.

Dr. JORDAN also gave an account of the proceedings at the Zoological Congress at Buda-Pest.

Exhibits.

THE BIONOMICS OF *LUDIUS FERRUGINEUS*.—Mr. H. DONISTHORPE exhibited specimens of *Ludius ferrugineus* and made the following remarks :—

“When I determined, some three or four years ago, to make an intensive study of the Coleopterous Fauna of Windsor Forest, I first of all made a list of the rarer species that had been taken there, years ago, by Stephens and others.

“Of these species I have retaken the following :—

“*Trinodes hirtus*, F., *Gnorimus variabilis*, L., *Agilus sinuatus*, Ol., *Elatér nigerrimus*, Lac., *E. coccinatus*, Rye, *Megapenthes tibialis*, Lac., *Lymexylon navale*, L., *Phloeotrya rufipes*, Gyll., *Ischnomera sanguinicollis*, F., *Scraptia fuscula*, Müll., *Platypus cylindrus*, F., and last, but not least *Ludius ferrugineus*, L.

"This is the insect I have brought to exhibit, and about which I wish to talk to you to-night. I propose first of all to describe to you how I found its larvae; secondly, what was already known of its habits; thirdly, how it was reared from the larvae, and what I have discovered about its life-history; and finally, to record its distribution as at present known.

"It was not until June 23rd, 1926, that I first found the striking larvae of this beetle in Windsor Forest, although I had been specially hunting for it in that locality, for two, or three, years. On that occasion an ash tree, with a *brunneus* nest in the lower part, had been cut down for me. The upper part, when split open, was found to be hollow, and full of damp wood mould, or frass, and a large number of *Dorcus parallelepipedus* larvae. In the wood mould I found eight large 'click' larvae, which I realised were too long for any species we possess, except *Ludius ferrugineus*. However, I took one of these larvae to the British Museum, and my friend Mr. Blair, and I, verified it from the literature.

"On August 20th, 1926, in the same locality, I found in some frass from a small hole in a very large standing beech tree, elytra evidently belonging to this beetle. This tree was cut down on August 24th, and the entire trunk, when split open, was found to be hollow, and full of damp frass. Very many *Dorcus* larvae were present, between twenty and thirty *Ludius* larvae, and a number of remains of the perfect insect.

"In looking up what is known concerning the habits of this beetle in the literature, one generally finds it is recorded as being 'very rare, in decayed trees.' Fowler gives willow, poplar, and walnut; and Dorn states that the larvae of this beetle, in Germany, of which one never finds the imago, live in the wood mould of old trees, and are not attached to any special tree, but the mould must be damp. He points out that they are generally found in company with the larvae of *Osmoderma eremita*, Scop., *Cetonia aurata*, L., or *Petosia aeruginosa*, Drury, these all being Lamellicorns, two of which are not found with us. Du Buysson comes nearest to the truth; he says that the larvae breed in the exuviae and rejectamenta of the larvae of *Cetonia* and *Osmoderma*. I have found out, however, that *Ludius* larvae actually devour the Lamellicorn larvae with which they live. Miss Kirk and I have brought home from Windsor Forest, from time to time, large quantities of *Dorcus* larvae, all of which have been devoured by the voracious *Ludius* larvae. This year we have been feeding the remaining unhatched *Ludius* larvae with larvae of *Gnorimus variabilis*, having no *Dorcus* left, and having taken a large number of the *Gnorimus* larvae. The *Ludius* larva first bores a hole into the Lamellicorn larva and sucks its juices, and finally devours the whole body.

"We tried many experiments before we hit upon the plan which suited the *Ludius* larvae best. I had been advised to keep them out of doors; to put them in flower-pots covered with glass; in glass jars covered over with muslin, etc., etc.; but in every case the frass, of which we had brought home a large supply, started to go mouldy. The larvae were at once taken out and placed in fresh frass. Finally we found that a medium-sized, tightly closed tin, kept indoors, full of damp frass, was the best receptacle in which to rear these larvae, the reason being that the larvae were thus kept in the dark in surroundings resembling their natural habitat. At the beginning of the winter we turned out the contents of all the

tins and gave each *Ludius* larva a tin to itself full of well-damped frass and a supply of *Dorcus* larvae. They were then left in an upper room for the winter. In the spring they were again overhauled, when every trace of a *Dorcus* larva had disappeared. Only a few *Ludius* larvae had died, and none of the frass had gone mouldy.

"The *Ludius* larvae started to pupate at the end of May. For this purpose the larva constructs an oval, smooth, cell, in an egg-shaped ball of frass, in which it assumes a position in the shape of a U, with its head and tail pointing upwards. I had fixed up our largest larva in one of Mr. Main's glass rearing structures—in this, of course, it was unable to construct a ball to pupate in, as in the tins, but it cleared away the frass between the glass walls, in the same oval shape. In the pupal state the insect assumes a vertical position, apparently resting on the point of the tail. The insect passes some three weeks in the pupal state—one larva which pupated on June 2nd, 1927, hatched on June 25th, 1927. By June 25th thirteen perfect *Ludius* had emerged, and only two pupae died; both of these had pupated in the only tins in which we had bored holes in the lids!

"*Ludius ferrugineus* is widely distributed in Europe, but the perfect insect appears to be very rare everywhere. It has been recorded in England from Hyde Park, Richmond Park, Darenth Wood, Windsor, Clengre, Chesterton, Bottisham, Stanton Downham, and Swansea. Fowler wrote, in 1890, that—'the latest capture seems to have taken place in July, 1858, when a specimen was taken by a schoolboy on a poplar by the river Cam between Cambridge and Grantchester, which was afterwards in the collection of Mr. T. Brown of Cambridge.'

"In conclusion I have to thank Miss Kirk for her kind help with the rearing of these interesting larvae and the Officers of the Crown Estate office for the facilities that enabled me to carry on my studies of the Coleopterous Fauna of this ancient forest land."

BUTTERFLIES FROM SOUTH AMERICA.—MR. A. DICKSEE exhibited:—

(1) A gynandromorph of *Morpho menelaus*, L., together with the female for comparison. The right side is entirely female, with the exception of the small blue male marking on the black border of the hind-wing, whereas on the left side, both wings are more than half male.

(2) Four males of *Morpho portis*, Hubn., form *psyche*, Fld., together with a typical individual for comparison, in order to put on record the fact that this variety is not merely a discoloured specimen as Fruhstorfer suggests. It is manifest that four specimens cannot all be discoloured. As a matter of fact the underside is perfectly distinct and much more like *M. aega* than *M. portis*.

(3) An extraordinary blue *Agrias* from Colombia, which is like *A. stuarti*, Godm., above, and like *A. beata*, Stgr., below, with the exception of the fact that the small red marking is changed to yellow. This gives further proof of the theory that all these are one species, as this particular specimen was caught in the same district as the two examples shown of *A. beata*.

AN ABERRATION OF *HEODES VIRGAUREAE*.—DR. V. B. WIGGLESWORTH exhibited an example of an aberration *Heodes virgaureae* var. *zermattensis*.

THE APPARENT CREPUSCULAR DANCES OF TWO SPECIES OF AFRICAN BUTTERFLIES.—Dr. S. A. NEAVE communicated the following notes from Mr. RODNEY C. WOOD of Cholo, Nyasaland.

"Several years ago, when in Northern Alberta, Canada, I had the opportunity of observing daily for ten days the remarkable 'dances' performed by a large Hepialid moth (*Sthenopis quadriguttata*, Grt.). Every evening for a short period of late summer numbers of the males of this moth could be seen in a curious flight over the spot where a female was resting on a bush or the ground. The 'dance' consisted of a kind of figure-of-eight kept up interminably and with great rapidity in the one spot. If the reader has seen a cowboy perform with a lariat one of those figures of fancy rope-spinning known to them as an 'ocean wave' he will get the most satisfactory idea of this flight that can be depicted, the swiftly-moving circle of rope undulating from side to side with tremendous rapidity and seeming to trace a thin wavy line so ethereal that the eye can hardly follow it. Sometimes two males would seem to interweave their figures. They were easily caught, as they kept steadfastly to the same aerial lines of flight. The dance only began as the twilight faded, and was thus crepuscular.

"Now I had seen nothing similar to this in Central Africa until this year, when two curious instances of an apparently similar nature were remarked.

"On January 1st, 1927, I was sitting on my verandah in the Cholo district of Nyasaland when I noticed a specimen of *Libythea laius*, Trim., pass over the house and fly down the open park-like garden in front, checking at and flying round several low trees or bushes on its way. Grabbing a net, I followed, as I was anxious to take a specimen, many having passed over that afternoon in rapid sustained flight towards the east, usually rather high in the air.

"I may here remark on a very curious phenomenon of *Libythea* in this country. Each year about the first or second week in January enormous numbers of the butterflies appear for a day or two, invariably flying in one direction, though as far as I can ascertain at present this direction is not constant. In January, 1926, Mr. C. F. Belcher told me that while motoring from Zomba to Blantyre he had met swarms of thousands of the butterflies for the whole distance of some forty miles. He took several, of which he gave me some specimens. They were then flying in a northerly direction. A day or so later not a single one can be found. They will not appear again till the following year.

"To return to my case at Cholo. I lost sight of the butterfly by a *Juniperus procera* tree about twelve feet in height touching a somewhat larger wide-spreading native tree, so stood still looking around to see if it would show again. I then became aware of a dark insect, which at first I took to be a moth, flying in wavy undulations round about these two trees. Noticing it continue, backwards and forwards round and round, in a seeming kind of gambolling flight, I made a sweep at it with the net, but it dodged and at once settled motionless on a sprig of the juniper. This instant dash to cover and subsequent 'freezing' is a marked habit of many of our neutral-coloured butterflies in this country when threatened by any danger. Going up quietly I found it just level with my face and was astonished to see that it was the *Libythea* I had been following. The shape of the wings and long palps, plainly visible, allowed no possibility of doubt. Being unable to use

the net I was just closing my fingers over it when it darted off once more. For fully another ten minutes it kept up its rapid gambols or gyrations round the tree. I had shot after shot at it in the failing light, as it came regularly on the same line of flight, but its speed and dodging powers were astonishing, until at last I lost it completely in the gathering darkness.

"The second case occurred in Zomba on April 5th, 1927. In this instance the butterfly was the Hesperiid, *Zophopetes dysmephila*, Trim., of which two males were taken. I was the guest of Their Excellencies Sir Charles and Lady Bowring, and we were all sitting on the verandah of Government House just after sundown, when I noticed several insects flying round a low date-palm (a local species of *Phoenix*) by the corner of the entrance. I drew attention to it, and closer investigation showed us about half a dozen Hesperiids performing exactly the same kind of aerial evolutions as those described above. As with the others, the speed was amazing, the dancing flight whirling and undulating round the palm fronds. After repeated efforts I took two specimens, both of which were males, as was to be expected. Scared off by the sweep of the net, within a few seconds the others returned again. No flowers or other visible attractions could be seen near by, except one solitary moonflower blossom, but this was never visited. The date-palm was the focus of their activities. As before, the 'dance' continued until it was too dark to see further.

"Sir Charles Bowring has since told me that a few days later he saw the same occurrence round a bush near his tennis-court, but could not be sure that the butterflies concerned were of the same species as he had no means of capturing any.

"Now I find that the larvae of *Zophopetes dysmephila* are stated by Aurivillius to feed on date-palms, so it would appear to me that there might have been at least one female ovipositing or simply resting on the palm. The possibilities then are that these curious flights of the males are either (a) for sheer sexual display or courtship, or (b) to keep guard over a female when ovipositing.

"In the *Libythea* case it will be noted that I had seen it definitely check at each bush it encountered as though seeking something, and as numbers had been passing over all that afternoon it is quite possible that a female was already resting in the juniper or contiguous native tree where it started its aerial patrol, as I would then call it."

FURTHER NOTE, BY CAPT. C. R. S. PITMAN, ON THE MIGRATORY FLIGHT OF *BELENOIS MESENTINA*, Cram., OBSERVED IN KENYA COLONY IN JANUARY AND FEBRUARY, 1926.—Prof. POULTON said that he had received the following note upon another part of the huge migration of *B. mesentina* observed last year in the Nairobi district by Canon K. St. Aubyn Rogers and Dr. V. G. L. van Someren (*Proc. Ent. Soc. Lond.*, Vol. I., 1926, p. 8). Accompanying this new record were five examples of *mesentina* exhibited to the meeting. Capt. Pitman's note stated that these specimens, all females, were "Part of an immense migration of Pierine butterflies lasting for fully ten days, at the end of January 1926. The direction of the flight was southerly; the wind was from the east. The butterflies were flying over an escarpment up to 11,000 feet in height, from the Rift Valley, 3200 ft. (Suk). The flight was seen to be taking place in an area extending from a point 40 miles east to one 20 miles south-west of Mt. Elgon. The altitude of the locality

where they were chiefly observed was approximately 6000 ft." The escarpment referred to was the western boundary of the Rift Valley, and Suk an area in the Valley, to the N. and N.W. of Lake Baringo.

DR. G. D. H. CARPENTER'S OBSERVATION ON THE EPIGAMIC USE OF ITS ANAL BRUSHES BY THE MALE *DANAIDA CHRYSIPPUS*, L., IN E. MADI, UGANDA.—Prof. POULTON read the following note from a letter written 24 June, 1927, by Dr. Carpenter while on tour in Madi, N. Uganda :—

"On 2 June, at Zaipi, E. Madi, I discovered an interesting locality :—a very open treeless grassland sloping very gradually down to a swamp filled with rushes. Just at the bottom of the slope was a series of muddy wart-hog wallows and drinking places, with a line, about 200 yards long, of awful, thorny Acacias, in flower, growing rather close together. This locality was apparently very attractive to all the butterflies of the neighbourhood which congregated there, and, in late afternoon and evening, *paired off*. Owing to delay at this place in consequence of my wife's fever I was able to visit this locality daily for about a week, and caught such pairs *in copulâ* as I could. . . . By far the most interesting thing that I saw was a ♂ *D. chrysippus* of the form *albinus* courting a ♀ of the same form; and he acted in precisely the same manner as the *Amauris psytalea* I watched on Kome Island years ago! Here are the notes written that evening in my diary for 9 June :—

" ' In the afternoon (about 3 p.m.) saw a *chrysippus* courtship, both specimens fresh *albinus*. The ♀ sat on a horizontal grass-stem at the foot of some thorny Acacia bushes in flower. The ♂ hovered flutteringly about four inches above and in front of her, rapidly protruding and withdrawing a brush from the anal extremity. The ♀ took little notice, except occasionally to open and close her wings, until the ♂ came down straight in front of her and, in protruding the brush, seemed to touch with it the grass-blade on which she was sitting. This seemed to make her more excited and she moved forward to the spot, waved her antennae and wings more violently, so that I thought the consummation was coming to pass. But she merely flitted down among some lower stems and though the male followed and fluttered to her she would have no more to do with him and he went off. They were so surrounded by the thorns that I was unable to catch them, but could see that they were precisely similar varieties.' "

Dr. Carpenter was much to be congratulated. His earlier observation on *Amauris psytalea*, Plötz (*Proc. Ent. Soc. Lond.*, 1914, p. cxi) supplied the first record of the use of the Danaine scent-brushes in courtship, and now, thirteen years later, he has given us the second. "Isn't it strange," as he remarked in a letter of 29 August, "that this is the first observation to be noted on the courtship of the commonest butterfly in the world?" It was hoped that examples of the paired specimens captured at Zaipi, together with Dr. Carpenter's notes upon them, would be brought before the Society in the near future.

NOTE BY PROFESSOR R. C. PUNNETT, F.R.S., ON THE COURTSHIP OF A DANAINA BUTTERFLY IN CEYLON.—Prof. POULTON said that Prof. Punnett had told him of his observations upon a pair of Danaines of the *D. (Tirumala) limniace*, Cram., type of pattern, and had kindly written the following account :—

"9 July 1927.—The observation was made on the afternoon of Friday Aug. 13,

1909, at Peradeniya, on the other side of the river to that on which the gardens are. The note in my diary is as follows:—

“ ‘Saw two Danaids courting in the jungle. The ♂ (?) kept hovering over ♀ who remained on leaf below quite quiescent. When disturbed the ♂ took no notice, but ♀ flew off about a couple of yards to another leaf closely followed by ♂. Watched for ten minutes and then caught the hovering individual. Set. N.B. The tail filaments were not protruded.’

“ ‘I remember watching them and observing that the ♂ appeared to be in a sort of ecstasy. I ought to have watched longer, and doubtless should have done so had I realised I was witnessing anything hitherto unrecorded. But there were many leeches about and it was to frustrate their attentions that I caught the insect and moved on. I cannot trace the set specimen.’

This interesting observation indicates that the protrusion of the brushes may occupy only part, and perhaps a small part, of the time spent in courtship, or that, under certain conditions, it may not take place at all.

A TIPULID APPARENTLY MIMICKING A MOSQUITO.—Mr. F. W. EDWARDS exhibited specimens of a mosquito (*Sabethes* sp.) and a small Tipulid (*Molophilus* sp.) collected by Miss C. Longfield on the plateau of Matto Grosso, Brazil, in May 1927. *Sabethes* is a Tropical American genus remarkable among mosquitoes in having large “paddles” on the legs, formed of fringes of long outstanding scales, the use of which is not known; the paddles are found in both sexes and are therefore not purely connected with mating. In 1913 (*Proc. U.S. Nat. Mus.*, 44, p. 510) Dr. C. P. Alexander described under the name *Molophilus thaumastopodus* a small Tipulid which possessed similar fringes on the tibiae and tarsi. He did not at the time comment on the resemblance to *Sabethes*, but noticed it in 1921 when describing a second species of the group from Brazil (*M. pennipes*; *Proc. Acad. Nat. Sci. Philad.*, 1921, p. 72). For these two species he proposed the new subgenus *Eumolophilus*.

The specimens collected by Miss Longfield represent two new species of *Sabethes*, which I am describing elsewhere; the Tipulid also appears to belong to a new species, which may be described as follows:—

Molophilus (Eumolophilus) sabethoides, sp. n. Similar to *M. (E.) thaumastopodus*, Alex., and *M. (E.) pennipes*, Alex., differing as follows:—Femora not distinctly paler at the base. Each tibia with a rather narrow but conspicuous ring of snow-white hair close to the base; a similar ring close to the base of the first segment of the middle tarsi. Hairs on outer side of middle tibiae long and slightly raised, though much less conspicuous than those of the front tibiae. At the tip of the hind tibiae some of the long hairs are white. First segment of hind tarsi with long blue-black hairs standing straight out on four sides (similar to those of the hind tibia) instead of on the outer side only. Praescutum dark grey with a distinct dull black stripe on each side. Pleurae not quite uniformly black, a pair of narrow, parallel grey stripes visible when the insect is viewed from behind. Valves of ovipositor long, slightly curved, entirely yellowish. Wing-length 5 mm.

Type, ♀, Burity, Chapada, N.-E. of Cuyabá, Matto Grosso, Brazil. Alt. 2250 ft., at edge of original forest, 13.vi.1927; flying in sun.

Molophilus is a cosmopolitan genus of TIPULIDAE with a large number of species, but nowhere except in Tropical South America are species found with long fringes on the tibiae, nor are any other Tipulids known in which such fringes are developed to the same extent. The resemblance between *Sabethes* and the subgenus *Eumolophilus* therefore cannot be accidental; it is so marked that the two are not readily distinguished at the first glance. Both have a black fringe on the apical half of the outer surface of the front tibia. The mosquito has a large blue-black paddle occupying the outer half of the tibia and the whole of the first segment of the tarsus on the middle legs, the second segment of the tarsus having a rather long white fringe. In the *Molophilus* there are long hair-fringes of a similar length and colour (the second and following tarsal segments being white) but on the hind legs instead of the middle legs. This difference in the position of the fringes enhances rather than diminishes the resemblance between the two species, because, firstly, the middle legs of *Molophilus* (and all related genera) are always comparatively short, so that they could not very well display the paddles; and, secondly, the hind legs of *Sabethes* are normally carried bent forward over the head.

It should be noted that the paddles are not found in any mosquitoes other than *Sabethes*, and do not occur in the related genus *Sabethoides*. Another insect of somewhat similar appearance, also found in Brazil, is the Longicorn beetle *Phygopoda albitarsis*, Klug. More information as to the habits of all these insects is needed before any explanation of their strange resemblance can be offered.

Papers.

The following papers were read :—

1. "The specific characters of the British Humble-bees," by Mr. O. W. RICHARDS.
2. "On some objections to mimicry theory, statistical and genetic," by Dr. R. A. FISHER. (Communicated by Professor E. B. POULTON, F.R.S.)
3. "An entirely new group of Heteroptera," by Mr. W. E. CHINA and Mr. TEISO ESAKI.
4. "An error of metamorphosis, hysterotely, in a Lepidopterous pupa, with a discussion on prothetely and hysterotely," by Dr. E. A. COCKAYNE, M.A., F.R.C.P.
5. "The ancestry of the order Hymenoptera," by Dr. R. J. TILLYARD, F.R.S.
6. "Notes on the female genitalia in the Micropterygidae," by Mr. A. PHILPOTT.

Dr. R. A. FISHER gave a short account of his paper on "Some objections to mimicry theory, statistical and genetic."

Wednesday, 19th October, 1927.

Mr. J. E. COLLIN, President, in the Chair.

Election of Fellows.

The following were elected Fellows of the Society :—J. W. BOWHILL, Morelands, Grange Loan, Edinburgh; TEISO ESAKI, College of Agriculture, Kyushu Imperial University, Fukuoka, Japan; H. J. FALKNER, Gyfu, Barton, Torquay.

Exhibits.

BUTTERFLIES FROM NORTHERN ITALY.—Mr. E. B. ASHBY exhibited a number of butterflies from various localities in Northern Italy, including the environs of Turin and Oulx in the Cottian Alps, taken in May and June. They included *Argynnis cydippe* var. *cleodoxa*; *Agriades arragonensis*; *A. thetis* var. *ceronus* and var. *maja*; *Brenthis euphrosyne*; *Melitaea athalia*; *Heodes alciphron* var. *gordius*; *Anthocaris euphenoides* var. *alpina*; and *A. ausonia*.

SPECIES OF *ASCALAPHUS* FROM FRANCE AND ALGERIA.—Mr. A. DE B. GOODMAN exhibited and made remarks upon the following species of *Ascalaphus*:—

A. longicornis, L., which is fairly well distributed throughout the south of France, the exhibitor having met with it at St. Martin Vesubie, La Sainte Baume and in the Cevennes in June and July; *A. ictericus*, Cph., a very rare Algerian species, found singly in May and June at Hamman Righa and Teniet el Had; *A. libelluloides*, common locally throughout South France in June and July; and *A. ottomanus*.

With regard to the last-named the exhibitor had sent, in July 1921, several specimens of an *Ascalaphus* to the late Dr. C. L. Withycombe from St. Martin Vesubie, South France. These he identified as *A. ottomanus*, and he expressed surprise at their occurrence in South France, as their previous known range was from Dalmatia to the Black Sea. A few years later this locality was visited in July by Mr. H. Main, who saw *Ascalaphus* in great numbers there, and these doubtless were the same species, as in 1927 in late June the exhibitor had found *A. ottomanus* very abundant in the valley of the Madone des Fenetres, St. Martin Vesubie, while only one or two specimens of *A. longicornis* and *A. libelluloides* were noted. These St. Martin Vesubie specimens are identical with *A. ottomanus* from Asia Minor in the Natural History Museum.

A BRED SERIES OF *COLIAS CROCEUS*.—Mr. L. W. NEWMAN exhibited a series of *Colias croceus* bred from the var. *helice* captured in North Kent in mid June 1927. The ova laid numbered about 280, and a total of 208 specimens was bred, comprising ♂♂ 112, ♀♀ 49, var. *helice* 47, died as pupae 18, died as larvae 49, and about 5 escapes.

GYNANDROMORPHS AND INTERSEXES IN DIPTERA.—The PRESIDENT exhibited a typical lateral gynandromorph of *Musca autumnalis*, De G., and intersexual specimens of the Syrphids *Pyrophæna granditarsa*, Forst., and *Platychirus albi-manus*, F., the Therevid *Thereva nobilitata*, F., and the Anthomyids *Fannia manicata*, Mg., and *Mydaea flagripes*, Rdi., and communicated the following note:—

True gynandromorphs having some parts purely male and other parts purely female appear to be of much less frequent occurrence in the Diptera than intersexes in which females may possess more or less developed male characters or *vice versa*. Stein in 1890 (*Wien. Ent. Zeit.* ix, p. 129) recorded an example of a lateral gynandromorph of the Anthomyid *Hydrotæa meteorica*, L., and lateral as well as other gynandromorphs of *Drosophila melanogaster*, Mg. and *simulans*, Sturt., have been bred in America by Morgan and Bridges (*Carnegie Inst. Wash.* 1919, Publ. 278, pp. 1-122) and Sturtevant (*Genetics*, 1921, pp. 55-60). Other examples of possible

gynandromorphs have been recorded:—in the CULICIDAE by Felt in 1904 (*N. York State Mus. Bull.* 79, Ent. 22, p. 467), Bedford in 1914 (*Trans. Roy. Soc. S. Africa*, iv, pp. 143–144), Edwards in 1917 (*Bull. Ent. Research*, vii, p. 216), Brelje in 1923 (*Arch. f. Micro-Anat. C.*, p. 317), and Shute in 1926 (*Entomolog.* p. 12); in the BIBIONIDAE by Zetterstedt in 1850 (*Dipt. Scand.* ix, p. 3393); in the DOLICHOPODIDAE by Loew in 1874 (*Zeits. ges. Naturwiss.* x, pp. 75–79); in the STRATIOMYIDAE by Loew in 1846 (*Stet. Ent. Zeit.* vii, p. 302); and in the SYRPHIDAE by Wahlberg in 1847 (*Ofv. Kongl. Vet.-Akad. Forhand.* iv, p. 101).

Intersexes have been recorded in the CHIRONOMIDAE by Ashworth (*Naturalist*, 1921, p. 15); in the SYRPHIDAE by Becker in 1888 (*Wien. Ent. Zeit.* vii, pp. 71–74), and in 1894 (*Nov. Acta*, lxii, p. 250), by Villeneuve in 1910 (*Wien. Ent. Zeit.* xxix, p. 81), and by Lundbeck in 1916 (*Dipt. Danic.* v, pp. 202 and 205); in the EMPIDIDAE by Melander in 1901 (*Psyche*, ix, pp. 213–215); and in the ANTHOMYIDAE by Schnabl in 1890 (*Wien. Ent. Zeit.* ix, pp. 177–181 *), by Stein in 1889 (*Wien. Ent. Zeit.* viii, pp. 95–96) and in 1895 (*Berl. Ent. Zeit.* xl, p. 117), and by Villeneuve in 1912 (*Feville jaun. Natural.* (5) xlii, pp. 111–113).

Of the species exhibited this evening the gynandromorph of *Musca autumnalis* was caught at Chippenham (Cambs.) on June 14th, 1912, by Col. C. G. Nurse, and has exactly the appearance of an *autumnalis* made up of the right longitudinal half of a male and the left longitudinal half of a female, except that the hypopygium appears to be predominantly male.

The *Thereva nobilitata* was taken at West Stow (Suffolk) on July 24th, 1913, by Col. C. G. Nurse, and appears to be the first intersex recorded in the THEREVIDAE. It is predominantly male, but the eyes are slightly separated on the frons and the abdominal markings and pubescence are more female than male.

The two specimens of *Pyrophaena granditarsa* were taken at Tunbridge Wells (Kent) in August 1923 and September 1920, and are females with a slightly narrower frons than in normal females and with the four anterior tarsi showing a marked approach towards the sexual differences in normal males. Both specimens exhibit an equal tendency to melanism of the abdomen, only an ill-defined narrow median stripe on the second and third segments being reddish.

The *Platychirus albimanus* was caught by me at Aviemore (Inverness) on May 26th, 1913, and is a female with the frons slightly narrowed, the front legs showing a considerable approach towards the dilated tibiae and tarsi of normal males and the front femora with some of the peculiar bristles of the male behind. The abdomen is somewhat truncate behind, but, as in the specimens of *Pyrophaena*, is predominantly female and melanoid, being without the yellowish-grey or bluish-grey patches of either the male or female.

The *Fannia manicata* was taken by me at Newmarket (Suffolk) on July 20th, 1911, and is a female with narrower frons than usual, some indications of the usual male sexual characters in the legs and a somewhat modified male hypopygium.

The *Mydaea flagripes* caught by the late Mr. G. H. Verrall at Barton Mills (Suffolk) on August 14th, 1886, is also a female with narrower frons than in normal females and a modified male hypopygium in which the position of the parts is reversed, those normally ventral being dorsal.

* A similar specimen was exhibited by me on Nov. 1st, 1922 (*Proc. Ent. Soc. London*, p. lxxx).

THE ENTOMOLOGICAL SOCIETY OF LONDON

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All Fees should be paid to the Treasurer, Mr. W. G. Sheldon, at 41, Queen's Gate, S.W. 7, and *not to the Secretaries*.

Fellows desiring to pay their Annual Contribution through their bankers can obtain an official form of banker's order by applying to the Treasurer.

Fellows whose Contributions for the current year have been paid are entitled to receive the publications of the Society free of charge. Further copies may be purchased at reduced prices by applying to the Librarian.

Forms of application for Fellowship, copies of the Bye-laws and the List of Fellows may be obtained from the Secretaries.

MEETINGS AND EXHIBITIONS.

Intending exhibitors are required to send in their names and the nature of their exhibits to the Secretaries *before noon* on the day of the meeting, in order that they may be called upon from the chair. Descriptive notes of all exhibits should be handed to the Secretaries *at the same meeting* for printing in the Proceedings. If the lantern is required, 24 hours' notice must be given.

Fellows resident abroad, or who are otherwise unable to attend, are reminded that any specimens, notes, or observations they may send to the Secretaries will be considered by the Council, with a view to exhibition or reading at the meetings of the Society.

PAPERS AND ILLUSTRATIONS.

Fellows desiring to communicate papers to the Society must send the manuscript of such papers to the Transactions Secretary, Mr. N. D. Riley, Brit. Mus. (Nat. Hist.), Cromwell Road, London, S.W. 7, at least fourteen days prior to the date of the meeting at which it is proposed that such papers shall be read. Authors desiring their papers to be published in the Transactions must submit the manuscript, and proposals for illustrations, if any, to the Transactions Secretary at least fourteen days before the meeting of the Publication Committee at which it is desired such papers should be considered.

Authors proposing to illustrate their papers should communicate with the Secretaries before the drawings are executed. The size of the finished work on plates should be limited to $7\frac{1}{2}$ ins. by $4\frac{3}{4}$ ins., after allowing for reduction, if any.

Attention is called to the Instructions to Authors issued with Part I of each volume, which may also be obtained at the Office of the Society. Inattention to these regulations may involve an author in considerable expense.

WANTED.

The Society is willing to purchase volumes or parts of the Transactions for the years 1907, 1908, and 1912.

MEETINGS

TO BE HELD IN THE SOCIETY'S ROOMS

41, QUEEN'S GATE, S.W. 7

1928.

Wednesday, January (Annual Meeting) ...	...	...	...	18
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The Chair will be taken at Eight o'clock.

THE LIBRARY

is open to Fellows, and their friends when accompanying them, except during September, from 10 a.m. to 6 p.m., except on Saturdays, when it closes at 1 p.m. On the nights of meeting it remains open until 10 p.m.

NOTICE

Fellows are informed that they can have their Transactions bound at the following prices by Mr. H. J. Hardy, 68, London Road, Croydon, the Society's bookbinder:

Cloth : old size, 4s. 3d.; new size, 5s.

Buckram : old size, 4s. 9d.; new size, 5s. 6d.